

IN THE CLAIMS:

1 1. (currently amended) A laser projector comprising:
2 laser apparatus for projecting a picture beam that
3 includes visible laser light of wavelength equal to about
4 six hundred thirty-five (635) nanometers or longer; and
5 a reflective liquid-crystal light valve for modulating
6 the beam with a desired image.

1 2. (currently amended) The projector of claim 1, where-
2 in:
3 light that appears red in the beam comprises substan-
4 tially only said laser light of wavelength equal to about
5 635 nanometers or longer.

For the Examiner's convenience it is respectfully noted here that Applicant has proposed insertion of claims 80 through 86 (presented in sequence below) between claims 2 and 3.

1 3. (currently amended) A laser projector comprising:
2 laser apparatus for projecting a picture beam that
3 includes visible laser light of wavelength about six hundred
4 thirty-five (635) nanometers or longer; and
5 a reflective liquid-crystal light valve for modulating
6 the beam with a desired image; and wherein:
7 light that appears red in the beam comprises substan-
8 tially only said laser light of wavelength about 635 nanome-
9 ters or longer;
10 the laser apparatus comprises no solid-state lasers,
11 but rather exclusively lasers of gas type; and
12 said apparatus projects a beam in which light that ap-
13 pears red is of wavelength between about 635 and 650 nano-
14 meters.

1 4. (currently amended) A laser projector comprising:
2 laser apparatus for projecting a picture beam that
3 includes visible laser light of wavelength about six hundred
4 thirty-five (635) nanometers or longer; and
5 a reflective liquid-crystal light valve for modulating
6 the beam with a desired image; and wherein:
7 said apparatus projects a beam in which light that ap-
8 pears red is of wavelength substantially 647 nanometers.

1 5. (previously presented) The projector of claim 4,
2 wherein:
3 the image is a moving picture.

1 6. (currently amended) The projector of claim 1, further
2 comprising:

3 further laser apparatus for projecting one or more
4 beams that include green and blue laser light; and

5 wherein the laser light of wavelength equal to about
6 635 nanometers or longer mixes with the green and blue laser
7 light to provide substantially pure neutral colors including
8 pure white and pure black.

1 7. (currently amended) A laser projector comprising:
2 laser apparatus for projecting a picture beam that in-
3 cludes visible laser light of wavelength about six hundred
4 thirty-five (635) nanometers or longer;

5 a reflective liquid-crystal light valve for modulating
6 the beam with a desired image; and

7 further laser apparatus for projecting one or more
8 beams that include green and blue laser light;

9 wherein [:] the laser light of wavelength about 635
10 nanometers or longer mixes with the green and blue laser
11 light to provide substantially pure neutral colors including
12 pure white and pure black; and

13 the further laser apparatus projects substantially cyan
14 native laser light with the blue or green light, or both.

For the Examiner's convenience it is respectfully noted here that
Applicant has proposed insertion of claims 87 and 88 (presented in
sequence below) between claims 7 and 10.

8. - 9. (canceled)

1 10. (original) The projector of claim 6, further compris-
2 ing:

3 means for receiving high-bandwidth red, green and blue
4 computer-monitor signals from a computer;

5 wherein the projector serves as a high-color-fidelity
6 computer monitor.

1 11. (original) The projector of claim 6, wherein:

2 the liquid-crystal light valve is not controlled by
3 light derived from traditional broadcast video signals.

1 12. (original) The project r of claim 11, wherein the
2 liquid-crystal light valve is controlled by light or control
3 signals applied to the valve by writing onto a control stage
4 of the valve:

5 a vector, bitmap or other computer file scanned
6 from an image or generated in a computer, or
7
8 amplitude-modulated laser-diode illumination swept
9 two-dimensionally across the control stage,
10 or

11
12 images from a small transmissive liquid-crystal
13 display modulator, in turn written by signals
14 not derived from traditional broadcast video
15 signals, or

16
17 other entire frames without interlace, or

18
19 motion-picture film color separations, or

20
21 a still image from a slide or overhead-projection
22 transparency, or a color separation made
23 therefrom, or

24
25 a live image optically coupled, without electronic
26 intermediary, to the control stage.

13. (canceled)

1 14. (original) The projector of claim 6, wherein:
2 the first-mentioned laser apparatus and the further
3 laser apparatus, considered together, comprise one or more
4 lasers; and
5 every laser in the first-mentioned laser apparatus and
6 the further laser apparatus is exclusively a solid-state
7 laser.

1 15. (original) The projector of claim 6, wherein:
2 the first-mentioned laser apparatus and the further
3 laser apparatus, considered together, comprise one or more
4 lasers; and
5 every laser in the first-mentioned laser apparatus and
6 the further laser apparatus is exclusively a gas laser.

1 16. (currently amended) A laser projector comprising:
2 laser apparatus for projecting a picture beam that
3 includes visible laser light of wavelength about six hundred
4 thirty-five (635) nanometers or longer;
5 a reflective liquid-crystal light valve for modulating
6 the beam with a desired image; and
7 further laser apparatus for projecting one or more pic-
8 ture beams that include green and blue laser light;
9 wherein [:] the proportions of light power of the about
10 635-nanometer or longer-wavelength laser light, the green
11 laser light and the blue laser light are roughly eight to
12 six to five (8:6:5).

17. - 65. (canceled)

1 66. (currently amended) A laser projection system for
2 forming a sharp an image on an irregular projection medium
3 having portions at distinctly differing distances from the
4 projector; said system comprising:
5 laser apparatus for projecting a picture beam that in-
6 cludes laser light;
7 a liquid-crystal light valve for impressing a sharp an
8 image onto the beam; and
9 means for projecting the beam from the light valve,
10 with said impressed image being displayed sharply on sub-
11 stantially all such portions, at distinctly different dis-
12 tances, of onto such irregular projection medium as a show
13 for an audience.

1 67. (previously presented) The system of claim 66, where-
2 in:

3 the irregular projection medium comprises one or more
4 projection media selected from the group consisting of:

5

6 an interior of a dome, or other building having
7 internal surfaces that are not generally
8 normal to a projection direction,
9 an exterior of a dome, sculpture, monument, or
10 other structure having external surfaces that
11 are not generally normal to a projection
12 direction,

13 a waterfall,

14 a water fountain,

15 fog or a cloud,

16 ice,

17 a scrim in front of a curtain or screen,

18 a plurality of scrims in optical series,

19 one or more trees,

20 grass, vines or other foliage,

21 a hillside or other landscape, or other receding
22 surface, and

23 an array of people or other animals or other dis-
24 crete objects, or combinations thereof, at
25 diverse distances from the projecting means;
26 and

27

28 the projecting means display a protracted show on the
29 one or more projection media, for the audience.

1 68. (original) The system of claim 67, further comprising:
2 such irregular projection medium.

1 69. (original) The system of claim 66, further comprising:
2 such irregular projection medium.

70. - 72. (canceled)

1 73. (original) The system of claim 66, wherein:
2 the laser apparatus comprises one or more lasers; and
3 every laser in the laser apparatus is exclusively a
4 solid-state laser.

74. - 79. (canceled)

For the Examiner's convenience it is respectfully noted here that the Applicant has proposed insertion of:

- **claims 80 through 86 (all seven of which claims are presented immediately below) between claims 2 and 3; and**
- **claims 87 and 88 (also below) between claims 7 and 10.**

1 80. (previously presented) The projector of claim 2, further comprising:

3 means for also incorporating blue and green laser light
4 into the picture beam; and

5 separate, additional reflective liquid-crystal light
6 valves for modulating the blue and green light respectively.

1 81. (currently amended) The projector of claim 2, wherein:

3 said light valve also receives blue and green laser
4 light for modulation, within the same light valve.

1 82. (previously presented) The projector of claim 2, further comprising:

3 means for scanning the beam across a face of the light
4 valve during projection of each image, rather than flooding
5 the entire face substantially simultaneously.

1 83. (previously presented) The projector of claim 82, further comprising:

3 means for also incorporating blue and green laser light
4 into the picture beam; and

5 separate, additional reflective liquid-crystal light
6 valves for modulating the blue and green light respectively.

1 84. (previously presented) The projector of claim 2,
2 wherein:

3 said light valve also receives blue and green laser
4 light for modulation, within the same light valve.

1 85. (previously presented) The projector of claim 82,
2 wherein:

3 the laser apparatus comprises no solid-state lasers,
4 but rather exclusively lasers of gas type.

1 86. (previously presented) The projector of claim 2,
2 wherein:

3 the laser apparatus comprises no solid-state lasers,
4 but rather exclusively lasers of gas type.

1 87. (previously presented) The projector of claim 6,
2 further comprising:

3 means for also incorporating the blue and green laser
4 light into said picture beam; and

5 separate, additional reflective liquid-crystal light
6 valves for modulating the blue and green light respectively.

1 88. (previously presented) The projector of claim 6,
2 wherein:

3 said light valve also receives the blue and green laser
4 light for modulation, within the same light valve.

1 89. (previ usly presented) The projector of claim 66:
2 wherein the laser apparatus projects red laser light in
3 the picture beam; and
4 the light valve impresses red components of an image
5 onto the red laser light; and
6 further comprising:
7
8 means for also incorporating blue and green laser
9 light into the picture beam, and
10
11 separate, additional liquid-crystal light valves for
12 respectively impressing blue and green components
13 of the image onto the blue and green light.

1 90. (previously presented) The projector of claim 66,
2 wherein:
3 said light valve receives laser light components of
4 three respective colors and impresses corresponding color
5 components of the image onto the three respective light com-
6 ponents, respectively, all within the same light valve.

1 91. (previously presented) A laser pr jection system for
2 forming an image on an irregular projection medium having
3 portions at distinctly differing distances from the projec-
4 tor; said system comprising:
5 laser apparatus for projecting a picture beam that
6 includes laser light;
7 a liquid-crystal light valve for impressing an image
8 onto the beam; and
9 means for projecting the beam from the light valve,
10 with said impressed image, onto such irregular projection
11 medium to form a substantially sharp image on such medium at
12 such distinctly differing distances.

1 92. (previously presented) The system of claim 91, where-
2 in:

3 the irregular projection medium comprises one or more
4 projection media selected from the group consisting of:

5

6 an interior of a dome, or other building having
7 internal surfaces that are not generally
8 normal to a projection direction,
9 an exterior of a dome, sculpture, monument, or
10 other structure having external surfaces that
11 are not generally normal to a projection
12 direction,

13 a waterfall,

14 a water fountain,

15 fog or a cloud,

16 ice,

17 a scrim in front of a curtain or screen,

18 a plurality of scrims in optical series,

19 one or more trees,

20 grass, vines or other foliage,

21 a hillside or other landscape, or other receding
22 surface, and

23 an array of people or other animals or other dis-
24 crete objects, or combinations thereof, at
25 diverse distances from the projecting means;
26 and

27

28 the projection means form th substantially sharp image
29 on substantially each element of the selected ne r more
30 media.

1 93. (previously presented) A laser projector comprising:
2 laser apparatus for projecting a picture beam that
3 includes visible laser light of wavelength longer than 640
4 nanometers; and
5 a reflective liquid-crystal light valve for modulating
6 the beam with a desired image.

1 94. (previously presented) The projector of claim 93,
2 wherein:
3 said apparatus projects a beam of wavelength substan-
4 tially 647 nanometers.

1 95. (previously presented) The projector of claim 93:
2 wherein the light valve impresses red components of an
3 image onto the laser light of wavelength longer than 640
4 nanometers; and
5 further comprising:
6
7 means for also incorporating blue and green laser
8 light into the picture beam, and
9
10 separate, additional liquid-crystal light valves for
11 respectively impressing blue and green components
12 of the image onto the blue and green light.

1 96. (previously presented) The projector of claim 93,
2 wherein:
3 said light valve receives laser light components of
4 three respective colors and impresses corresponding color
5 components of the image onto the three respective light com-
6 ponents, respectively, all within the same light valve.